

**New Cingular Wireless PCS, DBA: AT&T Mobility: 54-0245-01 by EWK 08/23/2013**

Permit Application Date: 06/06/2013

New Permit No. - 967434P

The equipment consists of a One (1) diesel-fired emergency backup engine (93.0 hp) subject to NSPS Subpart IIII

Heat-Input cap. (MMBtu/hr)<sub>in</sub> = 0.570

Engine-Output (hp)<sub>out</sub> = 93.0

**Actual Emissions from EPA Certification Testing and AP-42, Table 3.2-3, at 500 hours of limited operations**

The NSPS standard is from § 89.112, Table 1, Tier 3. The actual emissions are from the NSPS standard and AP-42 emit factors. The actual emissions for SO<sub>2</sub> are from AP-42 Table 3.2-3. The applicable standard for NO<sub>x</sub> is in terms of NO<sub>x</sub> + HC. Therefore, the VOC emissions are accounted for in NO<sub>x</sub>. Conversion factor is based on 500 hrs: 0.25 ton-hr/lbs-yr = (500 hr/yr) X (ton/2000 lbs) The conversion from "g/kw-hr" to "lbs/hp-hr" is accomplished as follows:

CO: (5.00 g/KW-hr) X (1.0 lbs / 453.6 g) X (1.0 KW-hr / 1.341 hp-hr) = 0.008220 lbs/hp-hr

\* The NSPS Standard for NO<sub>x</sub> includes both oxides of nitrogen and volatile organic compounds.

NSPS Standard		NSPS Standard		Actual Emissions	
Emit	standard	Emit	results	Emit	Testing
Emit	=	Emit	=	Emit	=
	g/KW-hr		lbs/hp-hr		lbs/hp-hr
PM:	= 0.40	PM:	= 0.00066	PM:	= 0.00055
SO <sub>2</sub> :	= n/a	SO <sub>2</sub> :	= n/a	SO <sub>2</sub> :	= 0.00205
CO:	= 5.00	CO:	= 0.00822	CO:	= 0.00220
*VOC:	= n/a	*VOC:	= n/a	*VOC:	= n/a
*NO <sub>x</sub> :	= 4.70	*NO <sub>x</sub> :	= 0.00773	*NO <sub>x</sub> :	= 0.00705

The following represents actual emissions:

Emit	E.F.	Power Output		result	Convert	Result
Emit	=	lbs/hp-hr	X	hp	=	ton/year
				lbs/hour	X	ton-hr/lb-yr
PM:	= 0.00055	X	93.0	= 0.05	X	0.25
SO <sub>2</sub> :	= 0.00205	X	93.0	= 0.19	X	0.25
CO:	= 0.00220	X	93.0	= 0.21	X	0.25
VOC:	= n/a	X	93.0	= n/a	X	0.25
NO <sub>x</sub> :	= 0.00705	X	93.0	= 0.66	X	0.25

The following represents allowable emissions:

\* The NSPS Standard for NO<sub>x</sub> includes both oxides of nitrogen and volatile organic compounds.

Emit	E.F.	Power Output		result	Convert	Result
Emit	=	lbs/hp-hr	X	hp	=	ton/year
				lbs/hour	X	ton-hr/lb-yr
PM:	= 0.00066	X	93.0	= 0.06	X	0.25
SO <sub>2</sub> :	= 0.00205	X	93.0	= 0.19	X	0.25
CO:	= 0.00822	X	93.0	= 0.76	X	0.25
*VOC:	= n/a	X	93.0	= n/a	X	0.25
*NO <sub>x</sub> :	= 0.00773	X	93.0	= 0.72	X	0.25